



# TOBACCO & HEALTH

*By*

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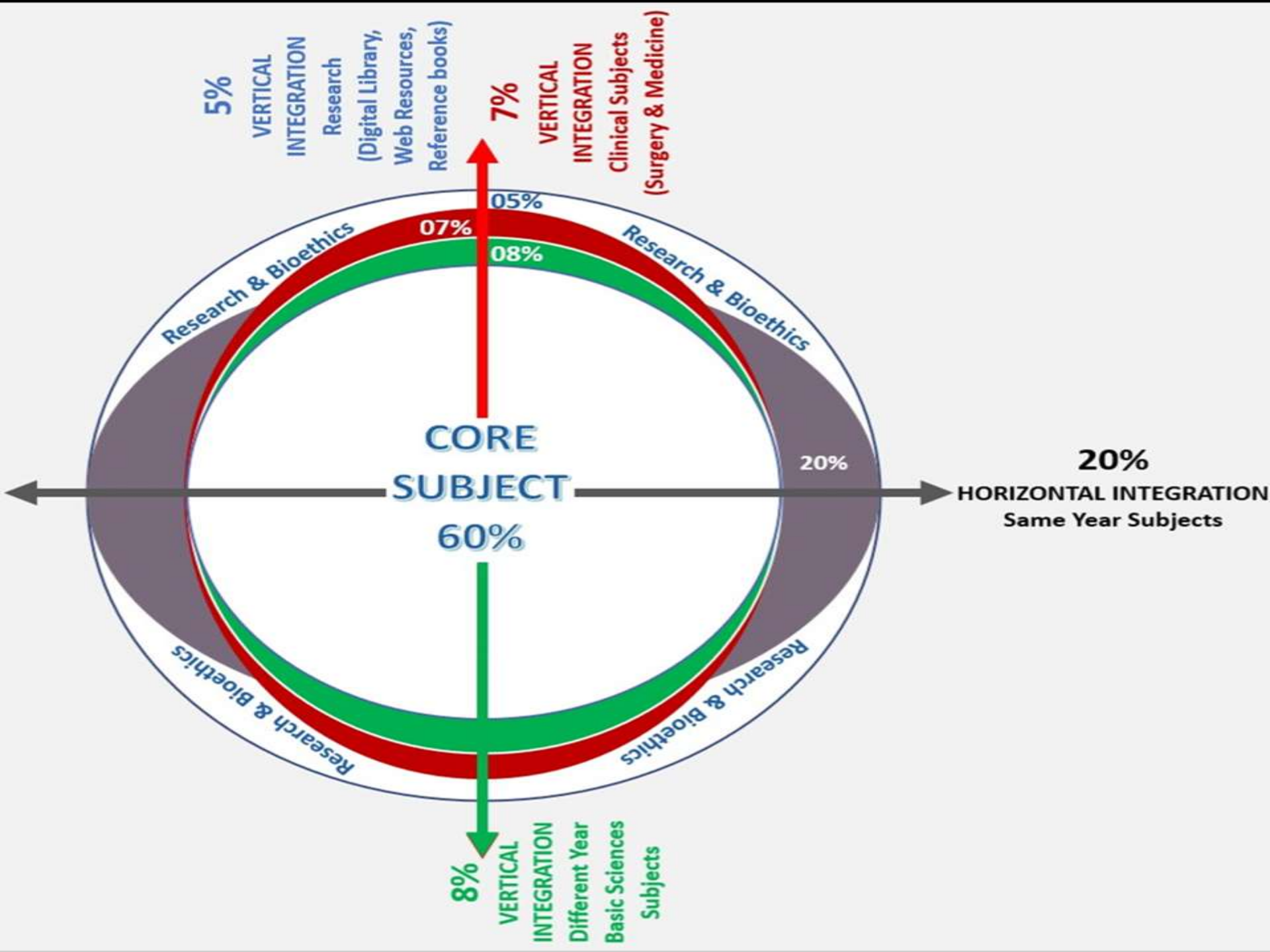
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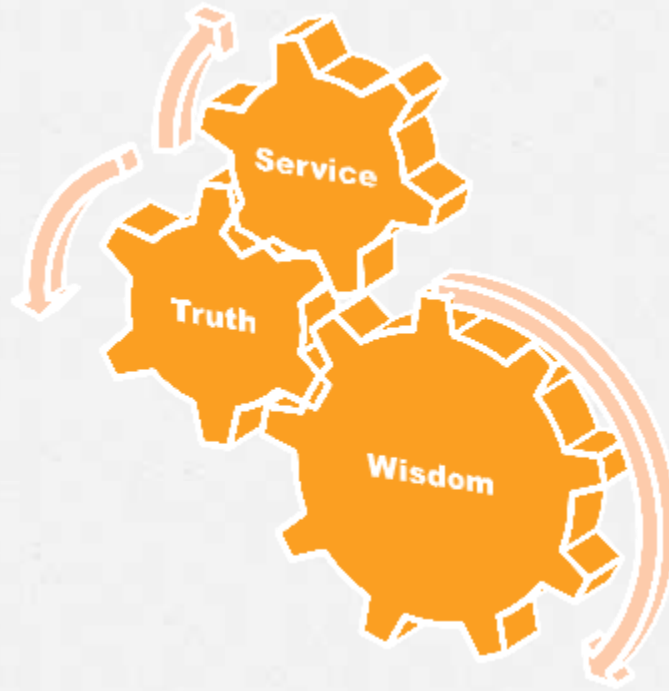
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# Vision & Mission of RMU



1. To impart evidence based research oriented medical education
2. To provide best possible patient care
3. To inculcate the values of mutual respect and ethical practice of medicine



# LECTURE SEQUENCE

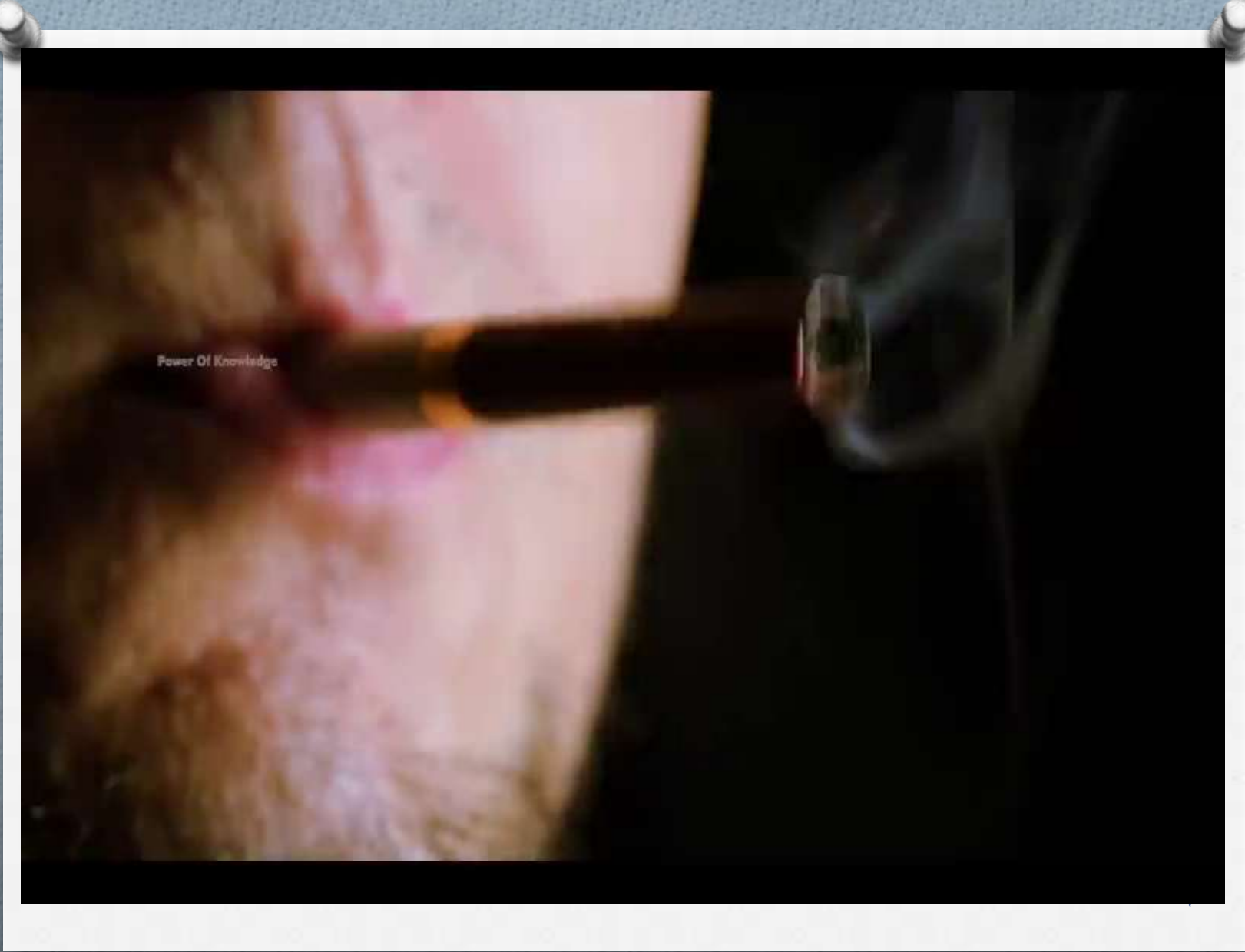
<b>SLIDE TITLE</b>	<b>No of slides</b>
<b>CORE CONTENT</b>	<b>16</b>
<b>HORIZONTAL INTEGRATION</b>	<b>01</b>
<b>VERTICAL INTEGRATION</b>	<b>03</b>
<b>FAMILY MEDICINE</b>	<b>01</b>
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# LEARNING OBJECTIVES

By the end of this session, students should be able to:

1. Briefly describe chemical constituents and habits related to tobacco
2. Discuss health effects of tobacco
3. Briefly discuss passive smoking
4. Discuss Tobacco control measures
5. Explain WHO Tobacco free initiative.





# FACTS ABOUT SMOKING

- o **1/3<sup>rd</sup> of world population-Smoker**
  - o Males: > 1 billion
  - o Females: > 250 million
- o **Industrialized Countries**
  - o % of Male smokers: 50%
  - o % of Female smokers 22%
- o **Developing countries**
  - o Males 35%
  - o Females 9%

*(Source: World Health Report)*





# FACTS ABOUT SMOKING

- o Three million deaths annually because of smoking – means one death after every 8 seconds.
- o Ten million deaths annually expected by 2020 - means one death after every three seconds.
- o Developed countries have reduced smoking by 10% while developing countries have increased by 60% after 1970.



# PAKISTAN PICTURE

- o Current Smokers – Approximately 15%
- o Pakistan is among 8 countries in which smoking trend will rise in next 20 years.
- o Pakistan will be leading in the race of tobacco sale in EMRO region in next 20 years.



# TYPES OF TOBACCO SMOKING

- o Cigarette - Most common and most harmful
- o Sheesha
- o Bidi
- o Tobacco chewing
- o Hookah(Hubble bubble)
- o Cigar
- o Snuff – Moist & Dry
- o e-cigarette



# E- CIGARETTE

- o An **e-cigarette** is a battery-powered device that converts liquid nicotine into a mist, or **vapor**, that the user inhales. There's no fire, no ash and no smoky smell. **E-cigarettes do** not contain all of the harmful chemicals associated with smoking tobacco **cigarettes**, such as carbon monoxide and tar.
- o The majority of toxic chemicals found in tobacco smoke are absent in **e-cigarette vapor**.
- o There is, however, a strong scientific consensus that **vaping** is far **better** for health than **smoking** (although it is best to neither **vape** nor **smoke**).



# INSIDE THE E-CIGARETTE



**Mouthpiece**

**Battery**

**Cartridge stores nicotine in a chemical solution of either glycerine and water or propylene glycol.**

**When the button is pushed, the nicotine is heated into a vapor that is then inhaled in the lungs.**



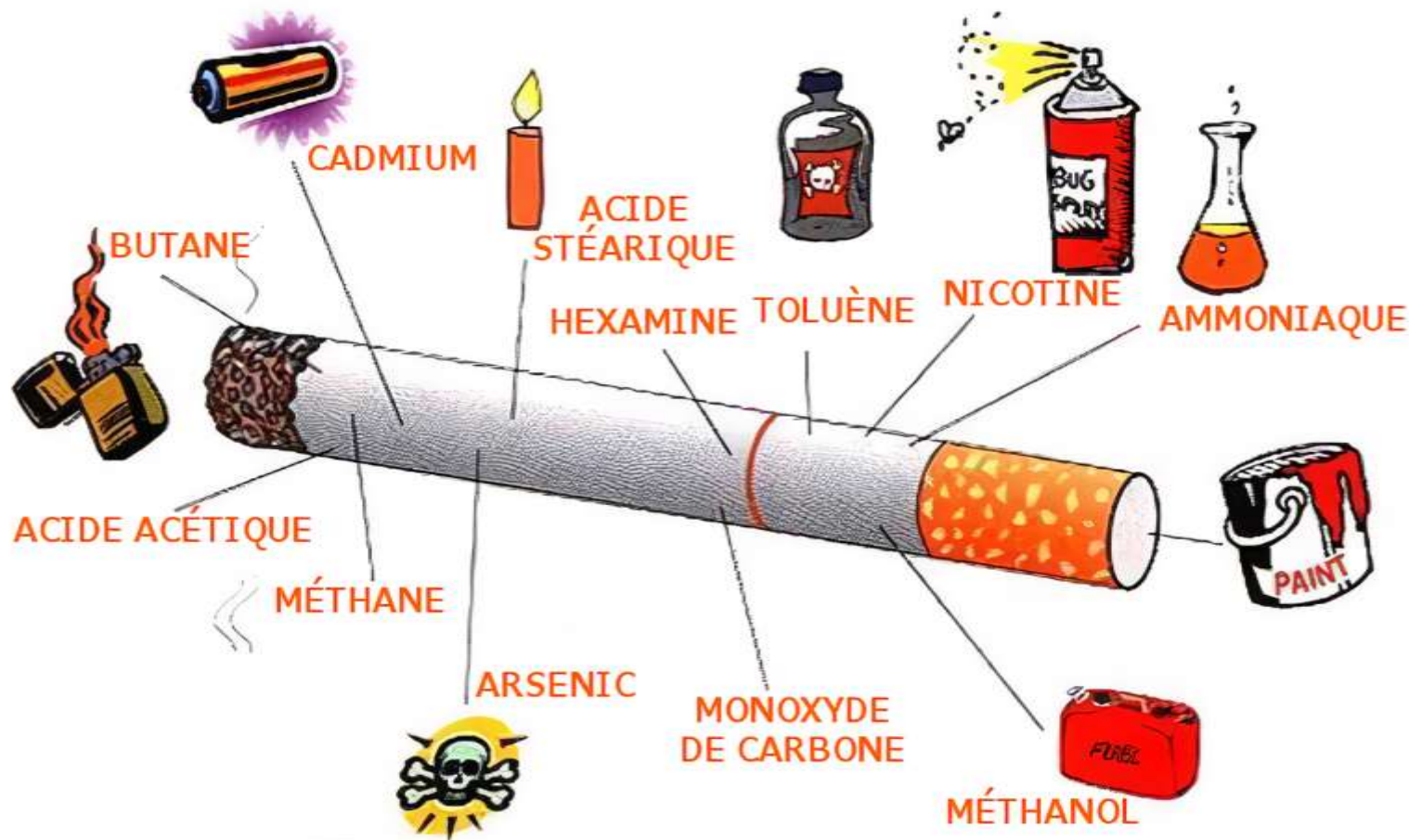
# CAUSES OF SMOKING

Usually the adolescents (mostly of 10-15 yrs) indulge in smoking as a result of

- o curiosity,
- o adventurism,
- o rebelliousness and adulthood,
- o a manly and masculine act that will lead them to happiness, fitness, wealth, power and sexual success.
- o Attractive advertisements influence the immature and unstable minds.



# COMPOSITION OF TOBACCO





# EFFECTS OF NICOTINE

- o Smokers have to maintain a level of nicotine in the blood for normal working.
- o Smokers have to smoke to avoid the discomfort experienced while not smoking.





# CONSEQUENCES OF SMOKING

- o Economic loss
- o Health loss
- o Socio-cultural loss
- o Psychological loss



# SMOKING AND DISEASES

- o An important causative/risk factor for various diseases.
- o About 25 diseases caused/aggravated by smoking. e.g.
  - o Lung cancer: 80-90% deaths due to smoking. Incidence 10 times more than non-smokers.
  - o Chronic bronchitis
  - o Emphysema: 80- 95%
  - o Ischaemic heart disease: 20-30% deaths . Risk is twice than non-smokers
  - o Obstructive peripheral vascular disease



# SMOKING AND DISEASES

- o Cerebrovascular disease
- o Cancer of tongue, oesophagus, larynx & pancreas, Gastro-duodenal ulcers
- o Cancer of the cervix and endometrium
- o Cancer of the urinary bladder
- o Still births, abortions
- o Neonatal deaths
- o Fracture of hip, wrist and vertebrae



## OCCUPATIONAL HAZARDS & SMOKING

***Effect of smoking in the presence of pollutants like asbestos, cotton, radioactive environment is either multiplicative or additive.***



# SMOKING DURING PREGNANCY

- Foetal retardation and growth retardation in the children.
- Children of smokers are more prone to become smokers later on.



# EFFECTS OF SECOND HAND (PASSIVE) SMOKING(SHS)

## o Children

- o Sudden infant death
- o Respiratory distress
- o Otitis media

## o Adults

- o Leads to discomfort, distress to asthmatics
- o Nicotine is detected in blood and urine of passive smokers.
- o Passive smoking by adults may lead to Ca-cervix, CA lung, and coronary heart disease.



# TREATMENT

- o **Drugs**
  - o **Nicotine replacement therapy**
    - o Patches
    - o Gums
    - o Nasal sprays
    - o Inhalers
    - o E-cigarettes
  - o Hypnotics
- o **Group therapy**



# TREATMENT

Real Treatment is by

- o Motivation
- o Commitment
- o Determination and
- o Effort and support in the struggle to quit smoking.



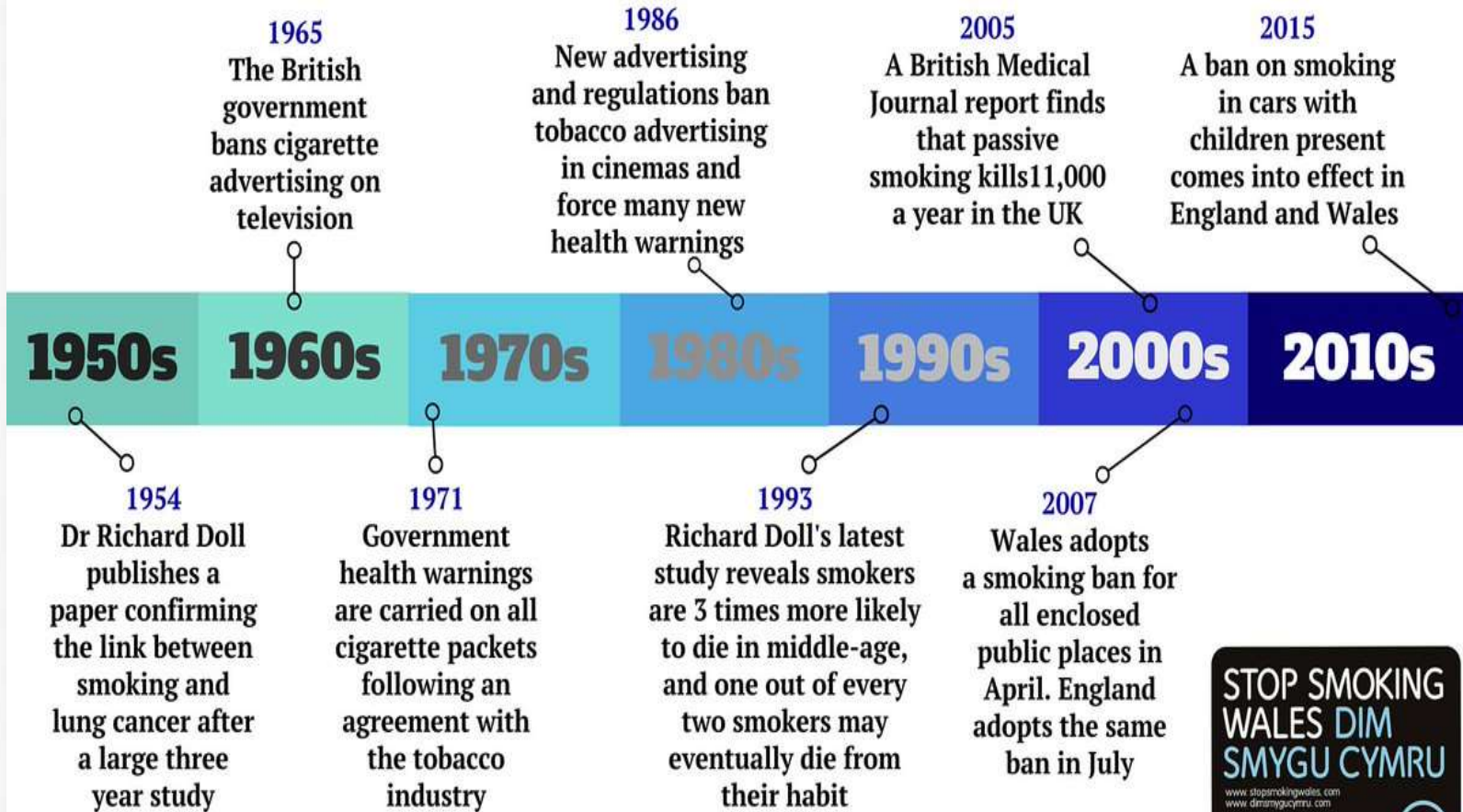


## PREVENTIVE MEASURES

- Recommendations of WHO Framework Convention on Tobacco Control (FCTC) should be implemented.
- Govt.'s responsibility for implementation of recommendations and legislation.
- Ascertain the existence of smoking as health problem.
- Encourage not to start smoking.
- Encourage to stop smoking.
- Multi-sectoral approach.



# MAKE SMOKING HISTORY



**STOP SMOKING  
WALES DIM  
SMYGU CYMRU**

www.stopsmokingwales.com  
www.dimsmegu.cymru.com

FREIPHONE / RHAGFFÓN  
**0800 085 2219**





# PREVENTIVE MEASURES

- o Anti-smoking health education to general public but special emphasis to focus on children and to the occupational groups.
- o Highlighting the positive effects of *NOT* smoking and *QUITTING* smoking.
- o Awareness for the rights of non-smokers.
- o Legislative action



# M-POWER

To expand the fight against tobacco epidemic WHO has introduced MPOWER package of 6 policies:

- ❖ **M**-Monitor tobacco use and prevention policies
- ❖ **P**-Protect people from tobacco smoke
- ❖ **O**-Offer help to quit tobacco use
- ❖ **W**-Warn about dangers of tobacco
- ❖ **E**-Enforce bans on tobacco advertising, promotion & sponsorship
- ❖ **R**-Raise taxes on tobacco



## TOBACCO FREE INITIATIVE (TFI) OF WHO

Bans on direct and indirect tobacco advertising

Tobacco tax and price increases

Smoke-free environments in all public and workplaces

Large clear graphic health messages on tobacco packaging





# WORLD NO TOBACCO DAY

31<sup>ST</sup>. MAY

## THEME FOR THE YEAR

2023 Grow food, not tobacco

2024 Protecting Children from  
Tobacco Industry Interference

2025 Uniting for a Tobacco-Free  
Future



# OBLIGATIONS FOR THE FRAMEWORK CONVENTION ON TOBACCO CONTROL

- o Protect public health policies from commercial and other vested interests of the tobacco industry.
- o Adopt price and tax measures to reduce the demand for tobacco.
- o Protect people from exposure to tobacco smoke.
- o Regulate the contents of tobacco products.
- o Regulate tobacco product disclosures.
- o Regulate the packaging and labeling of tobacco products.

o



## **OBLIGATIONS FOR THE FRAMEWORK CONVENTION ON TOBACCO CONTROL**

- Warn people about the dangers of tobacco.
- Ban tobacco advertising, promotion and sponsorship.
- Offer people help to end their addiction to tobacco.
- Control the illicit trade in tobacco products.
- Ban sales to and by minors.
- Support economically viable alternative to tobacco growing.





# HOPE OF LIFE FOR THE QUITTERS



# WHEN SMOKERS QUIT



**20 MINUTES**

After quitting

The heart rate and blood pressure drop back to normal

**2 WEEKS**

After quitting

Circulation and lung function improve

**1 YEAR**

After quitting

The risk of heart disease is reduced to 50%

**10 YEARS**

After quitting

The risk of dying from lung cancer drops 50%

**12 HOURS**

After quitting

The level of carbon monoxide in the blood drops to normal

**1-9 WEEKS**

After quitting

Coughs and breathing problems begin to disappear

**5 YEARS**

After quitting

The risk of throat, oesophagus and bladder cancer drops 50%. Risk of cervical cancer and stroke drop

**15 YEARS**

After quitting

The risk of heart disease is equivalent to a non-smoker

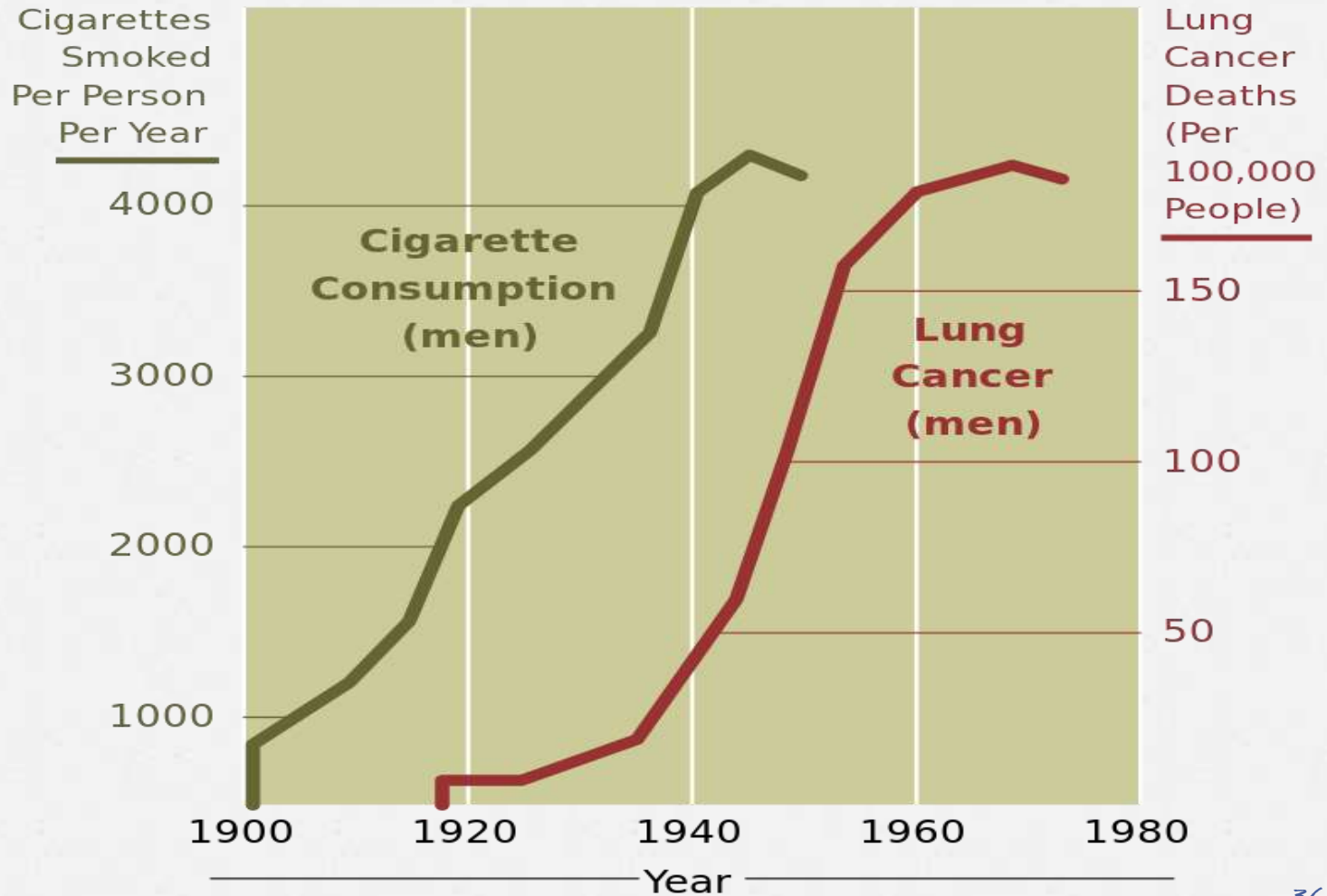


# FAMILY MEDICINE

- They provide emotional support for patients and play a considerable role in patients' choice of a treating oncologist, hospital, and in decisions over possible treatment options.



## 20-Year Lag Time Between Smoking and Lung Cancer





# RESEARCH

[Int J Prev Med.](#) 2016; 7: 7.

Published online 2016 Jan 11. doi: [10.4103/2008-7802.173797](https://doi.org/10.4103/2008-7802.173797)

PMCID: PMC4755211

PMID: [26941908](https://pubmed.ncbi.nlm.nih.gov/26941908/)

## Health Promotion Methods for Smoking Prevention and Cessation: A Comprehensive Review of Effectiveness and the Way Forward

[Mahaveer Golechha](#)<sup>1,2,3</sup>

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### Abstract

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Tobacco smoking is one of the greatest causes of mortality in the world, responsible for over 5 million deaths per annum. The prevalence of smoking is over 1 billion people, with the majority coming from low or middle income countries. Yet, the incidence of smoking varies vastly between many countries. Some countries have been able to decline the smoking and tobacco related morbidity and mortality through the introduction of health promotion initiatives and effective policies in order to combat tobacco usage. However, on the other hand, in some countries, the incidence of smoking is increasing still further. With the growing body of evidence of detriment of tobacco to health, many control policies have been implemented as health promotion actions. Such methods include taxation of smoking, mass advertising campaigns in the media, peer education programs, community mobilization, motivational interviewing, health warnings on tobacco products, marketing restrictions, and banning smoking in public places. However, the review of the effectiveness of various health promotion methods used for smoking prevention and cessation is lacking. Therefore, the aim of this review is to identify and critically review the effectiveness of health promotion methods used for smoking prevention and cessation. All available studies and reports published were considered. Searches were conducted using PubMed, MEDLINE, Ovid, Karger, ProQuest, Sage Journals, Science Direct, Springer, Taylor and Francis, EMBASE, CINAHL, and Cochrane and Wiley Online Library. Various relevant search terms and keywords were used. After considering the inclusion and exclusion criteria, we selected 23 articles for the present review.

**Keywords:** Health promotion, preventable deaths, smoking, tobacco



# BIOETHICS

Four commonly accepted principles of health care ethics, excerpted from Beauchamp and Childress (2008), include the:

- ❑ Principle Of Respect For Autonomy,
- ❑ Principle Of Non Maleficence,
- ❑ Principle Of Beneficence, And
- ❑ Principle Of Justice.

<https://depts.washington.edu/bhdept/ethics-medicine/bioethics-topics/articles/principles-bioethics>



# ARTIFICIAL INTELLIGENCE

## Chapter 9 - Roles of artificial intelligence in wellness, healthy living, and healthy status sensing

The growing desire for better control of health outcomes and the increasing healthcare costs associated with disease treatment has led to a shift in the healthcare paradigm from reactive to proactive. Advances in artificial intelligence (AI), the study of intelligent machines that maximize their likelihood of achieving a goal, and the rise of mobile health technologies (e.g., wearable devices and smartphone applications) have enabled healthcare to take place outside of the traditional clinical setting. In this chapter, we detail how AI algorithms can improve wellness assessment, aid in personalizing intervention strategies to promote healthier lifestyle behaviors, and uncover previously unknown disease risk factors. Organized across three dimensions of wellness (physical, mental, and social), this chapter highlights studies that utilize AI to incorporate new data sources or reinterpret preexisting data sources to further advance preventative medicine.



# END OF LECTURE ASSESSMENT

- o Question: Smoking is a major cause of which of the following health issues?
  
- o A) Obesity B)
- o Osteoporosis
- o C) Cardiovascular disease
- o D) Vision problems
- o E) Allergies

Answer : Cardiovascular disease





# END OF LECTURE ASSESSMENT

- o Question: Which of the following is a harmful component found in cigarette smoke that is responsible for addiction?
- o A) Vitamin C
- o B) Caffeine
- o C) Nicotine
- o D) Calcium
- o E) Iron

Correct Answer: C) Nicotine



# LEARNING SOURCES

- o K.PARK Text book of community medicine
- o Additional sources . World health organization for global data
- o [https://www.unaids.org/sites/default/files/media\\_asset/UNAIDS\\_FactSheet\\_en.pdf](https://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf)



**THANK YOU FOR  
NOT SMOKING**